

LITVAK, P.P., dots.

Modification of iridencleisis and its results. Oft.zhur. 13
no.2:106-109 '58. (MIRA 11:4)

1. Iz glaznogo otdeleniya (zav.-dotsent P.P.Litvak) Kishinevskoy
gorodskoy bol'nitsy.
(IRIS--SURGERY)

LITVAK, R.I.; SHKLOVSKAYA, R.Sh.

Use of vitamin P from tea leaves in capillary toxicosis of children.
Vit. res. i ikh. isp. no.4:240-244 '59. (MIRA 14:12)

1. 25-ya Gorodskaya bol'nitsa, Moskva.
(VITAMINS--P) (HEMORRHAGIC DISEASES)

USSR/Medicine - Dysentery

Mar 53

"Dynamics of the Phagocytosis Reaction in Children
Suffering From Acute or Chronic Dysentery," R. V.
Litvak, G. G. Gurevich, N. G. Sheynman (deceased),
Moscow City Inst of Epidemiol and Bacteriol

PA 244T30
"Zhur Mikrobiol, Epidemiol, i Immunobiol" No 3,
pp 27-31

The opsono-phagocytic reaction with respect to Flex-
ner bacilli is weak in the case of healthy children,
moderate in children below the age of 3 having any
form of the disease. The reaction becomes stronger

244T30

during the course of the disease, particularly
when clinical improvement takes place. In cases
of protracted and chronic cases of dysentery,
phagocytosis is very weak and does not rise with
clinical improvement. Vaccinotherapy stimulates
phagocytosis and raises the titer of Vidal's reac-
tion.

LITVAK, R. V.

244T30

LITVAK, R. V.

USSR/Medicine - Dysentery

Card 1/1

Author : Litvak, R. V.

Title : Data concerning the investigation of the Sonne bacillus. II. The antigen structure of the Sonne bacillus

Periodical : Zhur. mikrobiol. epid. i immun. 4, 46-47, Apr 1954

Abstract : This is the second in a series of 3 reports on the Sonne dysentery bacillus. The antigen and serological characteristics of the round and flat variant culture forms of the Sonne bacillus are investigated by means of agglutination, precipitation, and cross-adsorption reactions between the respective serums, microorganisms, and complete antigens. No references are cited.

Institution : Moscow Institute of Vaccines and Serums (Director-M. G. Kashtanova, Scientific Head- Prof. V. A. Chernokhvostov)

Submitted : December 19, 1953

LITVAK, R.Y.; SHUL'MAN, E.A.

Some data on the antigenic structure of *Shigella sonnei* and preparation of agglutinating and precipitating immune serums. Zhur. mikro-biol. epid. i immun. no.11:54-58 N '54. (MLRA 8:1)

1. Iz Moskovskogo instituta vaktsin i syvorotok (dir. M.G.Kashtanova, nauchnyy rukovoditel' prof. V.A.Chernokhvostov)

(SHIGELLA,

sonnei antigenic structure & prep. of immune sera)

(IMMUNE SERUMS,

Shigella sonnei immun. serum)

LITVAK, R.B.

USSR/General Problems of Pathology - Immunity.

S-1

Abs Jour : Referat Zhur - Biologiya, No 16, 1957, 71336

Author : Litvak, R.B.

Inst :

Title : The Complex of Physiological Reactions of the Organism
in Microbial Invasion.

Orig Pub : In coll.: Osnovy immuniteta, M., 1956, 37-53

Abstract : No abstract.

Card 1/1

- 8 -

LITVAK, R.V.; SHEYNMAN, N.G. [deceased]

~~REDACTED~~
Culturability of dysentery bacteria from mucus obtained in
rectoromanoscopy. Lab.delo 2 no.5:23-25 S-0 '56. (MLRA 9:11)

1. Iz Moskovskogo nauchno-issledovatel'skogo instituta epidemiologii
mikrobiologii i digiyny (dir. M.G.Kashtanova)
(SHIGELLA DISINTERIAE)
(BACTERIOLOGY--TECHNIQUE)

V-1

LITVAK, R.V.
USSR/Human and Animal Physiology.

Abs Jour : Ref Zhur - Biol., No 4, 1958, 17841

Author : R.V., Litvak

Inst :

Title : Certain Physiological Characteristics and Their Fluctuations in Adult and New-born Rabbits.

Orig Pub : Zh. mikrobiol., epidemiol. i immunobiologii, 1956, No 21, 91-95

Abstract : The average leukocyte count in adult rabbits is 8600 with fluctuations between 5000 and 10,000. Granulocytes and lymphocytes each account for 46% and monocytes for 8%. No seasonal fluctuations were noted. In repeated examinations with week-long and month-long intervals fluctuations were detected of 9 to 10% in the granulocyte count, 3 to 11% in the lymphocyte count and of 3 to 5% in the monocyte count. The mean blood sugar level was 105 mg% with

Card 1/3

LITVAK, R.V.

Certa in physiological indexes and their variation in mature and newborn rabbits. Zhur.mikrobiol.epid. i immun. 27 no.12:91-95 D '56.
(MLRA 10:1)

1. Iz Moskovskogo instituta epidemiologii, mikrobiologii i gigiyeny.
(RABBITS,
leukocyte count variations in newborn & adult rabbits
(Rus))
(LEUKOCYTE COUNT,
in adult & newborn rabbits (Rus))

↓
EPSHTEYN•LITVAK, R. V. Doc Biol Sci -- (diss) "Experimental study of the complex
of physiological reactions of animal organisms to the introduction of microbes."
Mos, 1957. 13 pp 22 cm. (Acad Med Sci), 100 copies
(KL, 7-57, 105)

19

LITVAK, R.V.

Comparison of suitability for cultivation of dysentery bacteria from intestinal mucosa and from feces. Zhur.mikrobiol.epid. i immun., supplement for 1956:20 '57 (MIRA 11:3)

1. Iz Moskovskogo instituta epidemiologii, mikrobiologii i gigiyeny. (SHIGELLA) (BACTERIOLOGY--CULTURES AND CULTURE MEDIA)

EPSHTEYN-LITVAK, R.V.

EPSHTEYN-LITVAK, R.V.

Nature of the body's physiological response as related to the size of the bacterial dose administered. Zhur.mikrobiol.enid. i immun., supplement for 1956:56 '57 (MIRA 11:3)

1. iz Moskovskogo instituta epidemiologii, mikrobiologii i gigiyeny. (IMMUNITY)

EPSHTEYN-LITVAK, R.V.

Effect of age on an animal's reactions to the introduction of microbial antigens. Zhur. mikrobiol. epid. i immun. 29 no.12:113-114 D '58.
(MIRA 12:1)

1. Iz Moskovskogo instituta epidemiologii mikrobiologii i gigieny.
(BLOOD CELLS)

KPSHTEYN-LITVAK, R., doktor biol.nauk

Dangerous enemy of health. Okhr.truda i sots.strakh. 3
no.6:69-71 Je '60. (MIHA 13:7)
(DYSENTERY)

EPSHTEYN LITVAK, R.V.

Preservation of titers of dry agglutinant sera under various
degrees of vacuum and humidity. Trudy IEMG no.7:136-143'60.
(MIRA 16:8)

(SERUM) (AGGLUTININS)

REZNIKOVA, Lyusi Solomonovna; EPSHTEYN, LITVAK, Rakhil' Veniaminovna;
LEVI, Moisey Iosifovich; SOKOLOV, N.I., red.; LYUDKOVSKAYA,
N.I., tekhn. red.

[Serological methodology of research in the diagnosis of com-
municable diseases] Serologicheskie metody issledovaniia pri
diagnostike infektsionnykh boleznei. Moskva, Medgiz, 1962.
370 p. (MIRA 16:3)

(SERUM DIAGNOSIS) (COMMUNICABLE DISEASES)

See Litvak.

BLANKOV, B.I.; LITVAK, R.V.; KAZ'MINA, Yu.G.

Effect of freezing on microbes of the typho-paratyphoid and
dysentery groups. Trudy ~~ISSL~~ no.7:96-109'60. (MIRA 16:8)
(LYOPHILIZATION) (SALMONELLA) (SHIGELLA)

EPSHTEYN-LITVAK, R.V.; KUZNETSOVA, L.F. [deceased]

Type and group antigens in subspecies of Flexner's and
Newcastle microbes. Zhur. mikrobiol., epid. i immun. 33
no.7:96-101 J1 '62. (MIRA 17:1)

1. Iz Moskovskogo instituta epidemiologii, mikrobiologii i
gigiyeny.

LITVAK, S.

PHASE I BOOK EXPLANATION SCV/4303

Printed. Universitet. Nauchnoye studencheskoye obshchestvo
Sbornik nauchnykh rabot studentov, vyp. 2 (Collection of Sci-
entific Works of Students, No. 2) Tver, 1959. 99 p. 500
copies printed.

Sponsoring Agency: Kiril'skiy gosudarstvennyy universitet.
Nauchnoye studencheskoye obshchestvo.

Resp. Ed.: L. A. Spectorov, Docent; Tech. Ed.: N. A. Yefimov.

PURPOSE: This book is intended for mathematicians, natural
scientists, and philologists.

COVERAGE: The collection of articles contains studies in mathe-
matics and mechanics, physics, biology, and philology written
by members of the Nauchnoye studencheskoye obshchestvo
(Students' Scientific Association) of Kiril'skiy gosudarstvennyy
universitet (Kiril State University) under the guidance of
faculty members. References accompany each article.

INDEXES

Alexander, Yu. (Fourth-Year Student of the Division of Physics
and Mathematics. Docent L. A. Spectorov, Scientific Adviser).
Effect of the Sample Composition on the Rate of Iodine
Evaporation from a Carbon Electrode 33

Zakharov, D. (Fourth-Year Student of the Division of Physics and
Mathematics. Docent L. A. Spectorov, Scientific Adviser).
Thermodynamic Measurement of Carbon Electrodes with Various
Electrolytes 41

Spalov, A. (Fourth-Year Student of the Division of Physics
and Mathematics. Docent L. A. Spectorov, Scientific Adviser).
Quantitative Analysis of Aluminum by the Width of Spectral
Lines 47

Kozlov, P. (Fourth-Year Student of the Division of Physics and
Mathematics. Docent L. A. Spectorov, Scientific Adviser).
X-Ray Spectrographic Study of Microcrystalline Aluminum Oxide
and Hydroxide 51

Zyrenkov, Zh. and V. Kozlov (Students of the Division of
Physics and Mathematics. Docent L. A. Spectorov, Scientific
Adviser). "Growth Curves" [Dependence of Spectral Line
Intensity on the Concentration of Atoms in the Source of Light
of Some Spectral Lines of Molybdenum and Nickel] 55

BIOLOGY

Aliev, A. (Fourth-Year Student of the Division of Biology
and Mathematics. Professor P. A. Turchakov, Scientific Adviser).
Data [Fish] from the Talas Basin 59

Koldashev, M. (Fourth-Year Student of the Division of Biology
and Mathematics. Professor P. A. Turchakov, Scientific Adviser).
Expedition to the Sumay Valley in the Summer of 1953 63

Dalys, L. (Fourth-Year Student of the Division of Biology.
Professor A. A. Turchakov, Scientific Adviser). Gudson (G. gobio
lepidolepis) from the Shabak River (Talas Basin) 67

Card 4/6

LITVAK, S.L. [Lytvak, S.L.], kand.med.nauk; ANTONENKO, M.D.

Treatment with androgens of some forms of pathologic climacteric.
Ped., akush. i gin. 22 no.6:48-49 '60. (MIRA 14:10)

1. Akushersko-ginekologicheskaya klinika (direktor - zasluzhennyy
deyatel' nauki prof. O.I.Malinin) Odesskogo meditsinskogo instituta
im. M.I.Pirogova (direktor - zasluzhennyy deyatel' nauki prof.
I.Ya.Deyneka) i kabinet lecheniya patologicheskogo klimakteriya
pri 5-y zhenskoy konsul'tatsii g. Odessy (zaveduyushchiy -
M.D.Antonenko).
(CLIMACTERIC) (ANDROGENS—THERAPEUTIC USE)

ACC NR: AR6028421

SOURCE CODE: UR/0196/66/000/005/T002/T002

AUTHOR: Riznik, A. Ya.; Litvak, S. Ya.

TITLE: Fuel-and-energy balance of SSSR. Methods of statistics and analysis

SOURCE: Ref. zh. Elektrotehnika i energetika, Abs. 5T5K

REF SOURCE: Toplivno-energeticheskiy balans SSSR. Metodologiya statisticheskoy razrabotki i analiza. Statistika, 1965, 151 str.

TOPIC TAGS: fuel consumption, specific fuel consumption, ~~fuel-statistics~~, electric power plant, *statistic analysis*

ABSTRACT: Data on the fuel-and-energy balance is given. The principal lines of fuel utilization are given in the Table. Of fuel produced in 1962, 20.7% was turned into electrical energy and 21.2%, into thermal energy. 58.1% fuel was consumed directly; 61% of electric energy produced was turned into power, 39% energy was used by industrial processes, illumination, etc. The industry used 69% of coal mined in 1962, 99% shale, 85% peat, 83% natural gas, 70% residues. Higher efficiency of fuel utilization was achieved by using natural gas, and also by utilization (at metallurgical plants) of coke and blast-furnace gases, coke rubbish, physical heat of gases, coke, metal and slags, heat from cooling systems, etc. About 60% industrial plants used less than 1000 tons fuel per year each; 31%, from 1000 to 10000 tons; 8%, from 10000 to 100000 tons; about 600 plants, over 100000 tons per year, of them

Card 1/3

UDC: 620.9(47)

ACC NR: AR6028421

about 60, over 1 million tons each. More than one-half plants has steam boiler installations. Over 90% boilers have a low output, mainly 1--2 tons steam per hour. The efficiency of these installations is usually 50--60%, i. e., substantially lower than that of large plants. Among the prime movers producing electric energy, over 260000 are low-capacity engines (60 ph on the average) which consume per one kwh by 50--60% more fuel than regional power plants. In 1962, the average efficiency of electric-energy production varied from 0.19 (East Siberia) to 0.31 (Volga area) yielding an average of 0.26 through SSSR. At the power plant having autonomous balance, 413 tons of conditional fuel were consumed per 1 kwh(?); at the industrial plants, 685 tons. Methods of compiling the fuel balance are examined. The importance of fuel utilization efficiency is emphasized. Bibliography of 25 titles.
M. Ravich [Translation of abstract]

Card 2/3

ACC NR: AR6028421

Principal lines of fuel utilization (1962)

	Total	c o m p o n e n t s				
		El. energy	Thermal energy	Mech. energy	Fuel processing	Others
Coal	100	28.9	23.0	10.9	19.9	17.3
Shale	100	37.9	15.4	-	41.3	5.4
Peat	100	38.7	31.3	0.7	11.9	17.4
Firewood	100	4.5	9.6	4.5	3.1	78.3
Petroleum	100	0.1	0.3	-	99.2	0.4
Natural gas	100	22.5	31.6	2.2	5.4	38.3
Residual oil	100	11.1	32.2	26.0	1.3	29.4
Diesel fuel	100	16.3	0.9	70.9	0.5	11.4
Metallurgical coke	100	-	-	8.7	2.1	89.2
Coke gas	100	7.2	10.9	2.3	4.7	74.9
Blast-furnace gas	100	9.7	16.2	4.0	-	70.1

SUB CODE: 21, 13, 09, 05

Card 3/3

RIZNIK, Anatoliy Yakovlevich; LITVAK, Samuil Yevseyevich;
TRET'YAKOVA, V.N., red.

[Fuel and power balance of the U.S.S.R.; methods for
statistical development and analysis] Toplivno-
energeticheskii balans SSSR; metodologiya statisticheskoi
razrabotki i analiza. Moskva, Statistika, 1965. 149 p.
(MIRA 18:10)

LITVAK, S. N.

Technology

(Radiophonic system of communication in a seaport). Moskva, Morskoi transport, 1951.

Monthly List of Russian Accessions, Library of Congress, November 1952. UNCLASSIFIED.

LITVAK, T.G.; SIMAT'KO, I.T.; KIRUBAYEV, A.M.

Echinococcosis of the kidneys and the retroperitoneal space.
Uch. zap. Stavr. gos. med. inst. 8:94-110 '63 (MIRA 17:7)

1. K'edra obshchey khirurgii (zav. kafedroy - prof. Yu.S. Gilevich) Stavropolskogo meditsinskogo instituta (rektor zasluzhennyy deyatel' nauki prof. V.G. Budylin).

LITVAK, T.G.

Hydatids of the kidneys. Uch. zap. Stavr. gos. med. inst.
12:196-197 '63. (MIRA 17:9)

1. Kafedra obshchey khirurgii (zav. prof. Yu.S. Gilevich)
Stavropol'skogo gosudarstvennogo meditsinskogo instituta.

LITVAK, V.(Odessa)

Indoor helicopter. Kryl.rod.7 no.12:17 D '56.
(Helicopters--Models)

(MIRA 10:3)

LITVAK, V.

AID P - 5536

Subject : USSR/Aeronautics - Model building
Card 1/1 Pub. 58 - 10/15
Authors : Kuryatnikov, E., Yu. Moroko, V. Litvak, A. Tarakanov
Title : Our readers suggest
Periodical : Kryn. rod., 12, 16-17, D 1956
Abstract : Four letters of the readers of the Wings of the Nation:
1) describing the construction of model wings and
empennage of thin profile; 2) advocating the use of
corn as model building material; 3) instructing in the
building of indoor models of helicopters; and 4) out-
lining the functioning of the rotors on the gyroplane
models. 4 drawings.
Institution : None
Submitted : No date

< LITYAK, V.; SHAPIRO, A.; EPSHTEYN, N.

Optical-photoelectronic instruments. Radio no.8:21,54 Ag '60.
(MIRA 13:9)
(Chemical engineering--Electronic equipment)

LITVAK, V.; MASLOV, V.

Practical coefficients of evaporation and rectification of admixtures
in the distillation with cognac apparatus. Prom.Arm. 5 no.12:35-38
D '62. (MIRA 16:2)

1. Yerevanskiy kon'yachnyy zavod (vor Litvak). 2. Krasnodarskiy
nauchno-issledovatel'skiy institut pishchevoy promyshlennosti (for
Maslov). (Armenia--Brandy) (Distillation apparatus)

LITVAK, V., inzh.; BARANOV, N., inzh.

Automatic switch. Radio no.2:45 F '64.

(MIRA 17:3)

SOLNTSEV, Yuriy Parfir'yevich; GALKIN, Mikhail Fedorovich; LITVAK, Valeriy Abramovich; SLITSKAYA, I.M., inzh., red.; SHILLING, V.A., red. izi-va; BELOGUROVA, I.A., tekhn. red.

[Reducing metal consumption for risers of ingots and castings]
Puti snizheniia raskhoda metalla na pribyl'nuiu chast' slitkov i
otlivok. Leningrad, 1961. 21 p. (Leningradskii Dom nauchno-
tekhnicheskoi propagandy. Obmen peredovym opytom. Seriya: Liteinoe
proizvodstvo, no.2) (MIRA 14:7)

(Steel castings)

LITVAK, V. I.

AID P - 1835

Subject : USSR/Engineering

Card 1/1 Pub. 110-a - 12/16

Authors : Aksel'band, A. M., Lappa, M. I., and Litvak, V. I.,
Kands. of Tech. Sci.

Title : Furnace with a rabble plate for marine fire-tube
boilers

Periodical : Teploenergetika, 3, 52-56, Mr 1955

Abstract : The authors describe an automatic device of their
own design for feeding a marine steam fire-tube
boiler using solid fuel. The chains driving the
fire grate-bars were designed by Eng. Vasil'yev.
The grates are equipped with a rabble of triangular
cross section. The authors describe in detail the
automatic control system regulating the movement of
the stoker. The results of tests made in 1952 and
1953 are summarized in a table. Six drawings and
diagrams.

Institution: Odessa Institute of Naval Engineers
Submitted : No date

AKSEL'BAND, A.M., kand.tekhn.nauk, dotsent; LITVAK, V.I., kand.tekhn.
nauk, dotsent

Experiments in mechanizing marine boiler fuel consumption.
Nauch.trudy OIIMF no.16:161-173 '58. (MIRA 11:11)
(Boilers, Marine)

LITVAK, V.I.

Electric telethermometer for surface silos. Sakh.prom. 30 no.9:23-
25 S '56. (MIRA 10:3)

1. Kiyevskiy zavod kontrol'no-izmeritel'nykh priborov.
(Thermometers) (Sugar industry--Equipment and supplies)

LITVAK, V. I.

120-4-22/35

AUTHORS: Zaika, A.A. and Litvak, V.I.

TITLE: An Automatic Polarimeter (Avtomaticheskiy polyarimetr)

PERIODICAL: Pribery i Tekhnika Eksperimenta, 1957, No.4,
pp. 78 - 81 (USSR).

ABSTRACT: The operation of the polarimeter (type CA-1) is based on the relationship between the rotation ($\Delta\phi = \alpha lc$) of the plane of polarisation of light and the concentration c of the investigated optically-active material for given values of the thickness l of the solution layer and the specific rotation α of the material.

Fig.1 shows the block diagram of the polarimeter. Light from a 100 W electric lamp passes through a double-lens condenser to a polariser. The intensity of the plane polarised light is caused to vary sinusoidally (50 c.p.s.) by a magnetic-optical modulator and passes through a light filter, a polarimetric tube with the investigated substance, a quartz compensator, and analyser, and then to a photo-cell which converts the light intensity variations into an alternating current. The compensator consists of two quartz prisms: one fixed (left-hand rotation), and the other movable (right-hand rotation). To correct for refraction, a glass prism is inserted between the two quartz prisms.

Card 1/2

An Automatic Polarimeter.

120-4-22/35

The polariser and the analyser are made from polaroid film so that in the absence of an optically-active solution in the polarimetric tube, no light reaches the photo-cell. When the solution is introduced between the polariser and the analyser, light falls onto the photo-cell and its intensity depends on the angle of rotation of the plane of polarisation due to the solution. This rotation is compensated by automatic rotation of the movable quartz prism, which is servo-controlled by the phase and frequency of the photo-cell output current. The reading is obtained from projection of the scale which is directly attached to the movable prism. Fig. 3 shows the light intensity and photo-cell current oscillations for different rotation angles. Fig. 4 is a photograph of the apparatus. Constructional and operating details are given. The instrument measures from -40 to $+100$ $^{\circ}$ ± 0.1 $^{\circ}$ S. There are 3 figures and 2 Slavic references.

ASSOCIATION: Kiev Control-measuring Equipment Factory
(Kiyevskiy zavod kontrol'no-izmeritel'nykh priborov)
SUBMITTED: January 31, 1957.
AVAILABLE: Library of Congress
Card2/2

LITVAK, V.I.
AUTHORS: Zaika, A.A., and Litvak, V.I.

115-5-30/44

TITLE: Objective-Glass Polarimeter with Automatic Adjustment (Obyektivnyy polyarimetr s avtomaticheskoy nastroykoy)

PERIODICAL: "Izmeritel'naya Tekhnika", No 5, Sep-Oct 1957, pp 69-72 (USSR)

ABSTRACT: The subject photoelectric objective-glass polarimeter with automatic setting, for use in the sugar industry, was designed by Kiyev Plant of Control Gages (Kiyevskiy zavod kontrol'no-izmeritel'nykh priborov) on suggestion of Engineer V.I. Kudryavtsev. The first unit of this instrument, called "sakharimetr CA" was shown at the 1956 All-Union Industrial Exhibition. A second improved model, demonstrated at the 1957 All-Union Industrial Exhibition, is now being produced by the same Kiyev plant. The design and operation of the instrument is described in full detail. It represents a photo-electronic optical device, the optical portion of which consists of a polarimeter and a projection system, and the electrical portion consists of an indicator, a follow-up system, an amplifier, feed blocks, and a reversible electric motor. The scale is graduated in degrees of the international sugar scale. The readings show directly the weight per cent of saccharose in the investigated medium. The measurement

Card 1/2

Objective-Glass Polarimeter with Automatic Adjustment

115-5-30/44

error is claimed to be less than with the existing conventional visual instruments. Its high sensitivity (0.05° S, or 0.017 circular degree) and accuracy make the instrument applicable also for checkups of other saccharimeters, of quartz tablets, or of cover glasses of polarimeter tubes for absence of inner stresses.

The article contains 1 photograph and 2 diagrams.

AVAILABLE: Library of Congress

Card 2/2

Litvak V.I.

LITVAK, V.I.

Electric temperature regulator with proportional control. Kons. 1
ov. prom. 12 no.12:9-11 D '57. (MIRA 11:1)

1. Tsentral'noye konstruktorskoye byuro Kiyevskogo sovnarkhoza.
(Thermostat)

LITVAK, V.I.

LITVAK, V.I.; SHAPIRO, A.Ya.

Proportional controlling unit. Spirt.prom. 23 no.8:20-22 '57.
(MIRA 11:1)

(Automatic control)

LITVAK, V.I.

The "TRS-120" signaling thermometer. Sakh. prom. 31 no.4:30-32 Ap '57.
(MLRA 10:6)

1. Kiyevskiy zavod kontrol'no-izmeritel'nykh priborov.
(Thermometers)

LITVAK, V.I.

ZAICA, A.A.; LITVAK, V.I.

Industrial optical saccharimeter with automatic adjustment. Sakh.
prom. 31 no.5:25-27 My '57. (MLRA 10:6)

1. Kiyevskiy zavod kontrol'no-izmeritel'nykh priborov.
(Saccharimeter)

SOV/115-58-6-33/43

AUTHORS: Zaika, A.A., Litvak, V.I., Epshteyn, N.Ya.

TITLE: A Mercury Illuminator in Refractometry (Rtutnyy osvetitel' v refraktometrii)

PERIODICAL: Izmeritel'naya tekhnika, 1958, Nr 6, p 83 (USSR)

ABSTRACT: A quantitative analysis of solutions is mostly made by the refractometric method, in which the refraction index of the solution depends on the quantity of dry matter dissolved in it. The refraction index depends also on the wave length of the monochromatic light used. Usually, the spectral line of sodium is employed. For higher precision a shorter wave length such as that of mercury is used. A mercury lamp has been developed which is contained in a glass bulb and is equipped with a light filter for the mercury line. The lamp is of the type PRK-4. The device indicates dry substances in solutions with an accuracy of 0.1 %. There is 1 table.

Card 1/1

LITVAK, V.I.; EPSHTEYN, N.Ya.

New photoelectric instruments used in the food industry.
Biul. tekhn.-ekon. inform. no.8:54-57 '58. (MIRA 11:10)
(Photoelectric measurements)

ZAIXA, A.A.; LITVAK, V.I.; SHAPIRO, A.Ya.

The RU-type induction liquid-level regulator used in vessels.
Biul.tekh.-ekon.inform. no.12:47-48 '58. (MIRA 11:12)
(Liquid level indicators)

LITVAK, V.I.; SHAPIRO, A.Ya.

New electrical controlling unit with proportionnl action. Sakh.
prom. 32 no.2:41-44 F '58. (MIRA 11:3)

1. TSentral'noye konstruktorskoye byuro Ukrglavprodmashtel'.
(Electric controllers)

ZAICA, A.A.; LITVAK, V.I.; SHAPIRO, A.Ya.

Induction level regulator. Sakh. prem. 32 no.11:44-46 H '58.

(MIRA 11:12)

(Kiev--Liquid level indicators)

LITVAK, V.I.; YAROTSKIY, V.D.

Conductometers for the verification recording and automatic regulation of the supersaturation coefficients (from "Zucker," No.1 and 4, 1958). Sakh. prem. 32 no.11:69-71 N '58.

(MIRA 11:12)

(Sugar manufacture) (Conductometric analysis

ZAICA, A.A.; LITVAK, V.I.; SHAPIRO, A.Ya.

Induction regulator of liquid level in the apparatus. Kons.i ov.prom.
14 no.2:25-26 F '59. (MIRA 12:3)

1. Kiyevskiy zavod radiopriborov (for Zaika). 2. Kiyevskiy zavod
kontrol'no-izmeritel'nykh priborov (for Litvak, Shapiro).
(Liquid level indicators)

LITVAK, V.I.; SHAPIRO, A.Ya.; EPSHTEYN, N.Ya.

Automatic photoelectric refractometer. Kns. 1 ev. prem. 14
no.3:10-15 Mr '59. (MIRA 12:3)

1:Kiyevskiy zaved kontrol'no-izmeritel'nykh priborov.
(Refractometer)

LITVAK, V.I.; SHAPIRO, A.Ya. (Kiyev)

New electric actuating mechanisms with proportional action. Avtom.1
telem. 20 no.2:253-256 F '59. (MIRA 12:3)
(Electric driving)

LITVAK, V.I.

Automatic photoelectric refractometers. Spirt. prom. 25 no.5:28-31
'59. (MIRA 12:10)

(Refractometer)

LITVAK, V.I.

Automatic photoelectric counter. Spirt. prom. 25 no.7:18-19
'59. (MIRA 13:2)
(Counting devices)

LITVAK, V.I., inzh.

Automatic device controlling electric lights of apartment house
stairways. Svetotekhnika 6 no.5:20-22 My '60. (MIRA 13:12)
(Apartment houses--Lighting)

LITVAK, V. I.

Utilizing photoresistances in devices for counting unit production.
Kons.i ov. prom. 15 no.6123-26 Je '60. (MIRA 13:9)

1. TSentral'noye konstruktorskoye byuro "Ukr glavprod mashdetal'"
(Canning industry) (Photoelectric cells)

LITVAK, Viktor Izrailevich; PROSKURYAKOV, V.I., red.; VORONIN, K.R., tekhn.
red.

[Photorelays in control and automatic systems] Fotorele v sistemakh avtomaticheskogo kontrolya i regulirovaniya. Moskva, Gos. energ. izd-vo, 1961. 110 p. (MIRA 14:10)
(Photoelectric cells) (Automatic control)

LITVAK, V.I., inzh.

Photoelectric piece counters. Mekh. i avtom. proizvod. 15 no. 6:42-44
Je '61. (MIRA 14:6)

(Photoelectric measurements)

LITVAK, Viktor Izrailevich; SKOBLO, D.I., kand. tekhn. nauk, dots.,
retsensent; CHISTYAKOVA, L.G., inzh., red.; GORNOSTAYPOL'SKAYA,
M.S., tekhn. red.

[Photoelectric devices and regulations used in machine
manufacture] Fotoelektricheskie pribory i regulatory v
mashinostroenii. Moskva, Mashgiz, 1962. 186 p.

(MIRA 15:4)

(Photoelectric measurements)
(Machinery industry--Equipment and supplies)

LI'VAK, V.I., inzh.

Improved automatic system for regulating electric lighting
in stairways. Svetotekhnika 9 no.10:27-29 0 '63.
(MIRA 16:11)

LETVAK, V.I.; KHLOPOV, V.P.

Time lag controller for photocontact marking. Avtom. i prib.
no. 1:67 Ja-Mr '64. (MIRA 17:5)

LITVAK, V. I.

Level indicator with remote adjustment. Priborostroenie no. 4:
16-17 Ap '64. (MIRA 17:5)

LITVAK, V.I.

Device for controlling periodical processes. Priboroastroenie
no.10:24-25 0 '64. (MIRA 17:11)

LITVAK, V.I.

Device for signaling the short-circuiting of current conducting
busbars with electrical systems. Avtom. 1 prib. no.3:55-56
JL-S '64. (MIRA 18:3)

L 45732-65 EPR/EWA(h)/EWT(L)/EEC(m) Po-4/Pg-4/Pu-4/Pl-4
 ACCESSION NR: AP5009040 S/0552/65/000/001/0054/0055

AUTHOR: Litvak, V. I.; Obodzinskiy, V. G.

TITLE: Photoelectric level sensor 25

SOURCE: Avtomatika i priborostroyeniye, no. 1, 1965, 54-55

TOPIC TAGS: level sensor, liquid level control

ABSTRACT: A simple photosensor consisting of a photodiode and a lamp fastened to the conventional tubular level gauge ("oilgauge") is proposed. The associated relay operation depends on either (a) an increase in the intensity of the light beam passing through the empty tube, when the liquid level drops or (b) a focusing of the light beam by the appearance of the liquid in the tube, when the liquid level rises. Orig. art. has: 2 figures.

ASSOCIATION: none

SUBMITTED: 00

ENCL: 00

SUB CODE: EC, IE

NO REF SOV: 00

OTHER: 00

Card 1/1

L 42424-65 EWT(d)/EWT(1)/ENP(c)/EEC(b)-2/ENP(k)/T/ENP(v)/DNA(h)/ENP(1) Pm-4/
Pb-4/Pc-4/Pf-4/Pg-4/Ph-4/P1-4

ACCESSION NR: AP5007784

S/0119/65/000/003/0007/0010

AUTHOR: Litvak, V. I. (Engineer)

TITLE: On reliability requirements

SOURCE: Priborostryeniye, no. 3, 1965, 7-10

TOPIC TAGS: reliability, statistical analysis, industrial equipment, instrumentation, test equipment

ABSTRACT: Reliability requirements are formulated for multiple action systems, i.e. for systems designed for continuous duty in which the components are put back into operation after every breakdown and preventative maintenance is practiced. Multiple action systems include most instrumentation, automation equipment, test equipment, machine tools, etc. Using the terminology of mass maintenance theory, the reliability of systems containing a large number of elements is determined by the "breakdown flux" and the "restitution flux." The basic breakdown flux characteristics which determine the dependability of operation in the system are the following. 1. The breakdown flux parameter $\lambda(t)$. For ordinary flux without after-effects

$$\lambda(t) = \frac{dm_{ep}(t)}{dt}$$

Card 1/8

L 42424-65

ACCESSION NR: AP5007784

where $m_{cp}(t)$ is the average number of breakdowns in the time interval from 0 to t .
For a stationary flux $\lambda(t) = \text{const} = \lambda = \frac{m_{cp}}{t}$;

where m_{cp} is the average number of breakdowns in the time interval t . 2. The average turnout per breakdown T --the reciprocal of the breakdown flux parameter.
3. The probability $P(t)$ of dependable operation during time interval t . In the case of cyclic (i.e. repeated action) equipment, T and t should be measured in the number of operations instead of time units. The basic characteristic of the restoration flux is the average restoration time spent in finding and repairing failures. If there are k groups with $n_1, n_2, \dots, n_k$ elements each and the restoration period for these elements is $\tau_1, \tau_2, \dots, \tau_k$, the average restoration time is

$$\bar{T}_s = q_1 \tau_1 + q_2 \tau_2 + \dots + q_k \tau_k$$

where q_i is the probability of breakdown in elements of the i -th group. For multiple action installations with a large number of elements, τ conforms to an ordinary logarithmically normal distribution law in which the probability density is given by the expression

$$f(\tau) = \frac{1}{\sqrt{2\pi} \sigma_x} \exp \left[-\frac{(\tau - x_0)^2}{2\sigma_x^2} \right]$$

Card 2/5

L 47424-65

ACCESSION NR: AP5007784

where $x = \ln t$, $x_0 = \overline{\ln t}$ is the average value of the natural logarithm for the random quantity t . The quantile x_p of this distribution law is

$$x_p = x_0 + U_p \sigma_x,$$

where U_p is the quantile of normal distribution at $x_0 = 0$ and $\sigma_x = 1$. Thus U_p is a linear function of x

$$U_p = ax + b,$$

where a and b are constants. This was checked against data on a year's operation of two complex test installations. The results are given in fig. 1 of the Enclosure. The maintenance convenience factor is given by

$$M = P + (1 - P)P_p,$$

where P is the probability that there will be no breakdowns, $(1 - P)$ is the probability of breakdowns, and P_p is the probability of successful repair. The maintenance convenience factor P_p is calculated for 1000 cycles with a 60-minute interval for finding and repairing failures in mechanical, electrical and hydraulic testing systems. Orig. art. has: 5 figures, 13 formulas.

ASSOCIATION: none

Card 3/5

L 42424-65

ACCESSION NR: AP5007784

SUBMITTED: 00

ENCL: 01

SUB CODE: IE, MA

NO REF SOV: 004

OTHER: 001

Card 4/5

LITVAK, V.I.

Automatic loading machines for fatigue testing of full-scale structures. Zav. lab. 31 no. 12:1530-1533 '65 (MIRA 19:1)

L 38156-66 EWT(d)/EWP(w)/EWP(v)/T-2/EWP(k)/EWP(h)/EWP(1) IJP(c) EM/WW

ACC NR: AP6025644

SOURCE CODE: UR/0413/66/000/013/0095/0095

INVENTOR: Bengus, G. Yu.; Litvak, V. I.; Muratov, V. V.; Yaremenko, V. A.; Grishchenko, V. T.

ORG: none

TITLE: Automatic device for airplane-flap fatigue tests. Class 42, No 183448

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 13, 1966, 95

TOPIC TAGS: aircraft actuating equipment, aircraft maintenance, aircraft maintenance equipment, aircraft test

ABSTRACT: An Author Certificate has been issued for an automatic device for conducting fatigue tests of airplane flaps, which consists of a frame and strap system for producing loads, a hydraulic system with loading cylinders which act on the frame and strap system through strain dynamometers, and hydraulic aircraft-flap drives. To reproduce stresses corresponding to the flap-deflection angle and the flight regime, and for the maximum approximation of the experimental and operational power-loading conditions, the device has a movable rocker of truss design, on which the loading cylinders are mounted, and an axis of rotation which corresponds to the flap's axis of rotation. It is equipped with a hydraulic servo system, in which a stress dynamometer is used as a sensing element, and a feed-back transducer; a device consisting of a steel console gauge with glued-on strain gauges and a shaped cam, the

Card 1/2

UDC: 620.178.629.13.014.69

L 38156-66

ACC NR: AF6025644

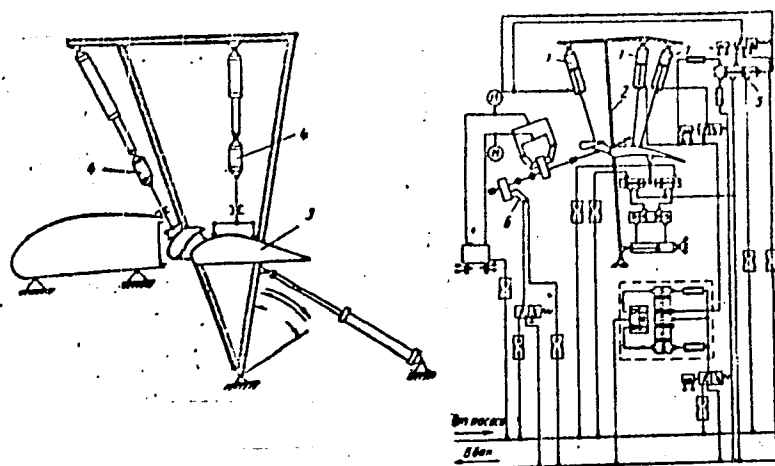


Fig. 1. Automatic device for fatigue tests of airplane flaps

- 1 - Loading cylinders;
- 2 - rocker; 3 - flap;
- 4 - strain dynamometers;
- 5 - slide valve;
- 6 - hydraulic motor.

shaft of which is connected to the flap drive shaft, is used as a master unit. For automatically synchronizing the loading of the flap's deflector, with a predetermined increase in the stress on the flap itself, a hydraulically controlled slide valve under a given spring compression force is connected into the hydraulic system of the device. Orig. art. has: 1 figure. [KT]

SUB CODE: Q,13/ SUBM DATE: 24May65/ ATD PRESS: 5145
Card 2/2MLP

VENIKOV, V.A.; GLAZUNOV, A.A.; KAZAK, N.A.; LITVAK, V.L.;
SYROMYATNIKOV, I.A.

Concerning the training of engineers-electricians in the
field of "electric power supply of industrial enterprises
and cities." Elektrichestvo no.2:94-95 F '64.
(MIRA 17:3)

LITVAK, V. S.

Developing an efficient system for the manufacture of brandy
alcohols. Prom.Arm. 4 no.11:36-40 N '61. (MIRA 15:1)

1. Yerevanskiy kon'yachnyy zavod.
(Armenia--Brandy)
(Distillation apparatus)

LITVAK, V.S.

Investigation of wine distillation processes in batch-type distillation apparatus. Izv.vys.ucheb.zav.; pishch. tekhn. no.6:129-134 '61.
(MIRA 15:2)

1. Yerevanskiy kon'yachnyy zavod.
(Wine and wine making--Equipment and supplies)

LITVAK, Ya.M.

Foreign body (napkin) remaining in the abdominal cavity for 30 years
and simulating a malignant tumor. Khirurgiya Supplement:52 '57.
(MIRA 11:4)

1. Iz gosspital'noy khirurgicheskoy kliniki Chlyabinskogo
meditsinskogo instituta.
(ABDOMEN--FOREIGN BODIES)

LITVAK, Ya.M., kandidat meditsinskikh nauk (Ivanovo (obl.), ul.Yermaka,
~~6.52/2, kv.11)~~

New modification of esophagoplasty taking into account late results
of some presteral esophageal substitutes. Vest.khir. 78 no.2:
112-116 P '57. (MLRA 10:3)

1. Iz gosptal'noy khirurgicheskoy kliniki (zaveduyushchiy -
professor P.M.Maksimov) Ivanovskogo meditsinskogo instituta.
(ESOPHAGUS, surg.
exophagoplasty, follow-up (Rus))

LITVAK, Ya.M., kand.med.nauk (Ivanovo (obl.) ul. Yermaka, d.52, kv.11)

Torsion of an intra-abdominal two-chamber hydrocele. Vest.khir.
81 no.12:90-01 D '58. (MIRA 12:2)

1. Iz gospi'tal'noy khirurgicheskoy kliniki (zav. - prof. P.M.
Maksimov) Ivanovskogo meditsinskogo instituta.

(HYDROCELE, in inf. & child
intra-abdom., with torsion (Rus))

LITVAK, Ya.M.

Clinical and experimental evaluation of the method of intra-intestinal feeding of patients during gastrectomy and in the early postoperative period. Vest.khim. 84 no.3:42-50 Mr '60.
(STOMACH--SURGERY) (POSTOPERATIVE CARE)

LITVAK, Ya.M., kand.med.nauk

Neurinoma of the duodenum. Khirurgiia 37 no.2:129-131 F '61.
(MIRA 14:1)

1. Iz fakul'tetskoy khirurgicheskoy kliniki (zav. - prof.
M.A. Blagoveshchenskiy) Ivanovskogo meditsinskogo instituta
i khirurgicheskogo otdeleniya Ivanovskoy oblastnoy bol'nitsy
(glavnyy vrach A.A. Cheyda).
(DUODENUM—TUMORS)

LITVAK, Ya.M., kand. med. nauk (Ivanovo (obl.), ul. Yermaka, d.52/2, kv.11)

Effect of omentorenopexy on the urination function of the kidneys
in portal hypertension. Vest. khir. 89 no.10:40-46 O '62.
(MIRA 17:10)

1. Iz fakul'tetskoy khirurgicheskoy kliniki (zav. - prof. M.A.
Blagoveshchenskiy), kafedr farmakologii (zav. - prof. G.M. Shpuga)
i patologicheskoy fiziologii (zav. - prof. S.S. Poltyrev) Ivanovskogo
meditsinskogo instituta.

LITVAK, Ya.M. (Ivanovo)

Filtration and reabsorption process in the kidneys after
omentorenopexy in portal hypertension. Pat. fiziol. i
eksp. terap. 7 no.1:56-61 Ja-F'63. (MIRA 16:10)

1. Iz kafedry fakul'tetskoy khirurgii (zav. - prog. M.A.
Flagoveshchenskiy), farmakologii (zav. - prof. G.M.Shpuga),
patologicheskoy fiziologii (zav. - prof. S.S.Poltyrev)
Ivanovskogo meditsinskogo instituta.

(PORTAL HYPERTENSION) (OMENTUM-SURGERY)
(KIDNEYS--SURGERY)

LITVAK, Ya.M., dotsent (Karaganda, Dvortsovyy proyazd, 30, kv.21)

Surgical treatment of cysts of the common bile duct. Vestn. khir.
92 no.5:83-85 My '64. (MIRA 18:1)

1. Iz kliniki obshchey khirurgii (zav. - dotsent Ya.M. Litvak)
Karagandinskogo meditsinskogo instituta na baze oblastnoy klini-
cheskoy bol'nitsy (glavnyy vrach - N.D. Lapshin).

ANAN'YEV, V.A., TKACHEV, P.G., POPIK, A.L., SEMENOV, Ye.P. SINAYKO, G.A.,
LITVAK, Ye.N.

Experiences in the prevention of Botkin's disease with gamma globulin.
Vop.virus 3 no.3:183-185 My-Je '58 (MIRA 11:7)

1. Institut virusologii imeni AMN SSSR, Moskva i Sanitarno-epidemiologicheskaya stantsiya Kishineva.

(HEPATITIS, INFECTIOUS, prevention & control
gamma globulin (Rus))

(GAMMA GLOBULIN, therapeutic use
in prev. of infect. hepatitis (Rus))

32923

S/194/61/000/011/058/070
D271/D302

4,2570(1139,1144,1159)

AUTHORS: Gershenzon, Ye.M., Gurvich, Yu.A., Litvak-Gorskaya, L.B. and Etkin, V.S.

TITLE: Some problems of development of microwave amplifiers based on negative mass of current carriers in semiconductors

PERIODICAL: Referativnyy zhurnal. Avtomatika i radioelektronika, no. 11, 1961, 13, abstract 11 K98 (V sb. Poluprovodnik. pribory i ikh primeneniye, no. 6, M., Sov. radio, 1960, 92-102) +

TEXT: The calculation is given of the microwave reflex amplifier making use of the negative effective mass of current carriers in semiconductors. It is shown that the product of the square root of gain K and transmitted bandwidth Δf increases with the concentration of negative mass carriers. The problem of the intrinsic noise of the amplifier is considered and effective temperature of

Card 1/2

32923

S/194/61/000/011/058/070

D271/D302

Some problems of development...

amplifier noise is evaluated. The upper limit of the effective noise temperature is 100°K for frequencies at which instability of the space charge does not occur. The comparison of the average periods of optical and acoustical scatters leads to the conclusion that acoustic scatter can be avoided by the use of a sufficiently strong electric field. It is suggested that a possibility exists of realizing an amplifier based on negative mass carriers in germanium, operating on d.c. because the amplification effect at the expense of negative mass must take place in this as well. Measurement of the voltage-current characteristic of a specimen may permit one to judge whether negative effective mass carriers are present. 8 references. [Abstracter's note: Complete translation]

Card 2/2

ACCESSION NR: AT3011981

AUTHORS: Gershenson, Ye. M.; Gurvich, Yu. A.; Litvak-Gorskaya, L. B.

TITLE: An ultra-high frequency modulator based on the Suhl effect

SOURCE: Poluprovodnikovyye pribory* i ikh primeneniye. Sbornik statey, no. 9, 1963, 29-35

TOPIC TAGS: ultra-high frequency, modulator, Suhl effect, carrier, absorption, surface recombination, wave guide, Lorentz force, Ga, diffusion length, Si

ABSTRACT: Modulating action of a modulator involves control of ultra-high frequency absorption by changing carrier concentration in the semiconducting material placed in the wave guide when mutually perpendicular electrical and magnetic fields are applied to this material. The setup is shown in Fig. 1 (see Enclosures). The Lorentz force thus arising deflects the carriers to one side of the plate or the other, depending on the mutual orientation of the fields. When the rate of surface recombination is substantially different on opposite sides of the plate, there occurs in the plate either an increase or decrease in total number of carriers. Tests were made on Ga (ρ 245-55 ohm cm, diffusion length of about 2 mm) in plates 50 x 10 x 0.3 to 50 x 10 x 0.7 mm. One side of the plate was etched in boiling

Card 1/7

ACCESSION NR: AT3011981

H₂O₂ to give a surface-recombination rate of 100-300 cm/sec. The rate on the other side, which was roughened with emery paper, was about 10 000 cm/sec. This difference in rate on opposite sides gave rise to nonlinear volt-ampere characteristics, shown in Fig. 2 (see Enclosures). Relationships of depth of modulation, efficiency of modulator, and time for establishing pulse are summarized in Figs. 3, 4, and 5 (see Enclosures). The authors conclude that Si has considerable promise for modulators/computed at high power levels. Orig. art. has: 6 figures.

ASSOCIATION: none

SUBMITTED: 00

DATE AQ: 14Oct63

ENCL: 05

SUB CODE: PH

NO REF SOV: 001

OTHER: 005

Card 2/7

L 13023-63
ACCESSION NR: EWP(q)/EWT(m)/BDS AP3000633 AFFTC/ASD JD

S/0181/63/005/005/1477/1478

AUTHOR: Gershenson, Ye. M.; Litvak-Gorskaya, L. B.

TITLE: Drift-velocity saturation of hot carriers in p-type germanium

SOURCE: Fizika tverdogo tela, v. 5, no. 5, 1963, 1477-1478

TOPIC TAGS: drift mobility, drift velocity, carrier, p-type Ge

ABSTRACT: The authors set up experiments to study the saturation of the drift velocity of carriers in strong electrical fields by using samples of p-Ge having different values of resistivity. Measurements were made along the [100] axis. The purpose of the work was to discover the cause of discrepancy between results of K. Seeger (Phys. Rev., 114, 2, 1959) and J. Zucker (J. Phys. Chem. Solids, 12, 3/4, 1960) on high-resistance samples. Changes in carrier mobility were determined from the volt-ampere characteristics of the specimen and by the absorption of ultra-high frequency energy transmitted through it. At room temperature no saturation of drift velocity was observed, but at 77K the slope of the plotted curve at values of 3.5-7 kv/cm for the field indicates that saturation is attained. The relationship between mobility and strength of electrical field

Card 1/2

L 13023-63

ACCESSION NR: AP3000633

is the same for materials of different resistivity (from 8 to 40 ohm cm). "The authors express their gratitude to Yu. A. Gurvich and I. K. Morozov for helping with the experiments and for discussing the results with them." Orig. art. has 2 figures. 3

ASSOCIATION: Moskovskiy gosudarstvennyy pedagogicheskiy institut im. V. I. Lenina (Moscow State Pedagogical Institute)

SUBMITTED: 30Nov62

DATE ACQ: 11Jun63

ENCL: 00

SUB CODE: 00

NO REF SOV: 000

OTHER: 006

Card 2/2

L 17997-63 EWT(1)/EWG(k)/BES AFFTC/ASD/ESD-3/IJP(C) Pz.4 AT
s/0181/63/005/006/1605/1610

ACCESSION NR: AP2001279

AUTHORS: Gershenzon, Ye. M.; Gurvich, Yu. A.; Litvak-Gorskaya, L. B.

TITLE: Magnetic-concentration effect in semiconductors

SOURCE: Fizika tverdogo tela, v. 5, no. 6, 1963, 1605-1610

TOPIC TAGS: semiconductor, magnetic-concentration effect, surface recombination, free path, electron density, hole density

ABSTRACT: The authors examine an approximation theory of changes in resistance of plates for the case when considerable changes in resistance are possible, i.e., when the ratio of electron to hole density differs from unity by an appreciable factor and when the rates of surface recombination at opposite edges differ sharply. A theory was first developed for a plate in which the thickness is small compared to the length and width. A magnetic field was considered to be directed along the width, an electrical field along the length. The values of specific resistance of the plate in the imposed fields and without the fields was computed and plotted. Such values were then obtained by experiment on an actual plate. A comparison of the two sets of values is shown in Fig. 1 (see enclosure). The authors conclude that their theory may be used to evaluate the efficiency of ultra-high-frequency modulators.

ASSOCIATION: Moscow State Pedagogical Institute

Card 1/B ✓

L 23525.65 EWA(h)/EWG(k)/EWT(1)/T Pz-6/Peb IJP(c) AT
ACCESSION NR: AP4046659 S/0185/64/009/009/0948/0955

AUTHOR: Gershenzon, Ye. M.; Gurvy*ch, Yu. O. (Gurvich, Yu. A.);
Ly*tvak-Gors'ka, L. B. (Litvak-Gorskaya, L. B.)
TITLE: On the realization of an amplifier using negative masses of current
carriers in semiconductors

SOURCE: Ukrayins'ky*y fizy*chny*y zhurnal, v. 9, no. 9, 1964, 948-955

TOPIC TAGS: negative mass current carrier, semiconductor, amplifier, anisotropic electromagnetic absorption, germanium

ABSTRACT: H. Kromer (Prve. IRE 47, 407 (1959)) has suggested the possibility of constructing an amplifier and a generator based on negative effective masses. The authors of the present paper have investigated this question experimentally and theoretically, and come to the conclusion that such an amplifier, or generator, working on negative effective masses of the holes in Ge cannot be realized. An anisotropic absorption of electromagnetic power in germanium in a strong electric field was found. Orig. art. has: 5 figures and 4 equations.

Card 1/2

L 23525-65
ACCESSION NR: AP4046659

ASSOCIATION: Moskovs'kyy pedinstytut im. V. I. Lenina (Moscow Pedagogical
Institute)

SUBMITTED: 05Jun63

ENCL: 00

SUB CODE: EC

NO REF SOV: 004

OTHER: 006

L 52002-65 EWT(1)/T/EWA(h) Feb/Pz-6 IJP(c) AT

ACCESSION NR: AP5012545

UR/0181/65/007/005/1378/1381

AUTHOR: Gershenson, Ye. M.; Gurvich, Yu. A.; Litvak-Gorskaya, L. B.

TITLE: Anisotropic absorption of electromagnetic waves by hot carriers in semi-conductors

SOURCE: Fizika tverdogo tela, v. 7, no. 5, 1965, 1378-1381

TOPIC TAGS: semiconductor, carrier temperature, electromagnetic wave absorption, microwave measurement, anisotropy, carrier effective mass, germanium, hot carrier

ABSTRACT: This research was undertaken in connection with attempts to observe the influence of negative effective masses of holes on the absorption of electromagnetic waves in germanium. Preliminary experiments (UFZh v. 9, 948, 1964) have shown that in a strong electric field the absorption of electromagnetic power by the semiconductor exhibits an anisotropy that is caused only by the presence of a dc drawing field. The present investigation consisted of more thorough experiments in which a germanium slab was exposed simultaneously to two electromagnetic waves, one with an electric field parallel to the drawing field, and the other perpendicular to it. This was done by clamping the germanium between two round

Card 1/3

L 52002-65

ACCESSION NR: AP5012545

2.
dielectric waveguides carrying two coherent TE₁₁ waves of mutually perpendicular polarization. The measurements were made at 77K using a p-Ge sample with a resistivity of 30 ohm-cm at room temperature; a pulsed drawing field was used. The details of the apparatus and of the experiments, which were performed at the 3-cm wavelength, were described in the cited paper and in PTE v. 10, no. 3, 1965. Some unaccounted for errors that are inherent in microwave measurements, wherein the carriers are heated by placing the sample in such a way that the microwave field is parallel to the drawing field, are briefly discussed. These cast doubts on the accuracy of results obtained by A. F. Gibson et al. (J. Phys. Chem. Sol. v. 19, 198, 1961 and elsewhere). The results show conclusively that absorption of electromagnetic waves by hot carriers in a semiconductor depends on the mutual orientation of the drawing electric field and the electric field vector of the wave. "The authors are grateful to L. A. Plokhova for participating in the experiments." Orig. art. has: 3 figures and 3 formulas. [02]

ASSOCIATION: Moskovskiy gosudarstvennyy pedagogicheskiy institut im. V. I. Lenina
(Moscow State Pedagogical Institute)

Card 2/3

L 52002-65

ACCESSION NR: AP5012545

SUBMITTED: 09Nov64

NO REF SOV: 002

ENCL: 00

OTHER: 005

SUB CODE: 88

ATD PRESS: 4009

B502
Card 3/3

L 05290-67 ENT(d)/ENT(m)/ENT(t)/ETI IJR(c) JD

ACC NR: AR6031905

SOURCE CODE: UR/0058/66/000/006/H043/H044

AUTHOR: Babenko, S. P.; Blagosklonskaya, L. Ye.; Gershenzon, Ye. M.;
Orlov, L. A.; Litvak-Gorskaya, L. B.

TITLE: SHF semiconductor modulators

SOURCE: Ref. zh. Fizika, Abs. 6Zh304

REF SOURCE: Tr. I-y Mezhd. konferentsii ped. in-tov po radiofiz. i spektroskopii. M., 1965, 175-186

TOPIC TAGS: shf semiconductor modulator, injection, exclusion, magnetococentration effect, modulator

ABSTRACT: Control of ¹Ge conductivity through the variation of the minority carrier concentration during injection, exclusion, and in the magnetococentration effect is investigated. To achieve adequate efficiency for a modulator using the increased carrier-concentration effect, resulting from the introduction of carriers through a p-n junction (injection), it is necessary to use a pure high-impedance material (~ 50 ohm. cm). Moreover, carrier concentration should vary in it 15--20 times, which corresponds to variations in resistivity from 50 to 3.5--2.5 ohm. cm. When use is made of the phenomenon of exclusion, which means that

Card 1/2

I. 05298-67

ACC NR: AR6031905

the specimen is deficient in minority carriers, a substantial variation in the impedance of high-resistance Ge can be produced by direct SHF-power heating. It is calculated that with the use of the magnetoconcentration effect with the specimen resistivity of over 45 ohm. cm, a diffusion length of 2—3 mm and recombination rates on the faces of $S_2 \simeq 100$ cm/sec and $S_1 \simeq 10^4 - 10^5$ cm/sec, the impedance is expected to vary by factors of 10—20 (with an increase in the total quantity of carriers) and by factors of 2—3 (with a decrease in the quantity of carriers). All these above-mentioned effects are recommended for use in the development of waveguide-type SHF modulators which, in principle, are absorption devices. Diagrams of the arrangement of thin Ge specimens in waveguides, as well as a block diagram of an experimental system, are given in the original article. A description is given of the methods of measuring the basic parameters of a modulator. G. Slobodenyuk. [Translation of abstract]

SUB CODE: 20/

Card

2/2 *eqk*

L 60915-65 EWT(d)/EWP(e)/EPA(s)-2/EWT(m)/EPT(c)/EWP(i)/EWP(c)/EWA(d)/EWP(v)/
 EPA(w)-2/EWP(j)/T/EWP(k)/EWP(h)/EWP(b)/EWP(l) Pc-h/Pf-h/Pr-h/Ps-h/Pt-7
 UR/0286/65/000/012/0045/0045
 621 791 77.037
 621.385.832
 23
 B 44
 ACCESSION NR: AP5019022 WW/RH/WH

AUTHOR: Marchenko, I. S.; Malkiyel', B. S.; Felizhanko, V. V.; Litvakh, F. Kn.;
 Shevchenko, I. G.; Krivich, Yu. A.; Plontkovskiy, A. B.

TITLE: Semiautomatic system for sealing metal to glass in cathode-ray tubes.
 Class 21, No. 171947

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 12, 1965, 45
 TOPIC TAGS: semiautomatic sealing system, cathode ray tube, cathode ray tube construction

ABSTRACT: An Author Certificate has been issued for a system for sealing metal to glass in cathode-ray tubes. To improve the efficiency of the system, eliminate intermediate furnace annealing, and maintain the desired temperature in the interval between the glass neck and metallic cone, the system is equipped with an electric heater. [TS]

ASSOCIATION: L'vovskiy elektrolampovyy zavod (L'vov Electric Lamp Factory)

Card 1/2